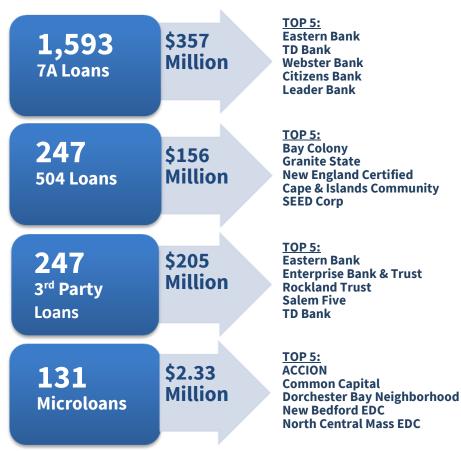


#### Massachusetts District Office Fiscal Year 2019 Annual Report

## **Powering the American Dream**

# State Impact Over \$4.8 Billion

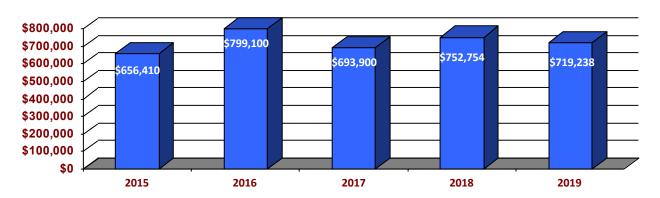
(Est: Lending, Surety Bonds, Contracting)



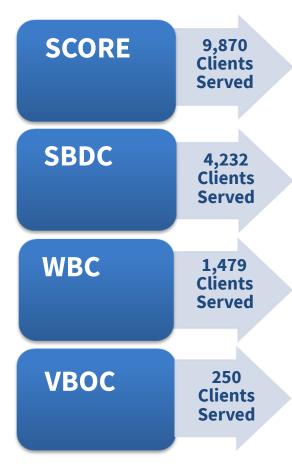
#### **Top 7 Lending Industries:**

- 1. Construction
- 2. Retail Trade
- 3. Accommodation and Food Services
- 4. Professional, Scientific and Technical Services
- 5. Other Services (except Public Administration)
- 6. Adm. Support & Waste Management & Remediation Services
- 7. Healthcare & Social Assistance

#### Total 7a and 504 Dollars (millions): FY15—FY19



#### Over 15,831 Clients Served by SBA's Resource Partners



SCORE is the nation's largest network of volunteer business mentors. Experienced executives share real-world knowledge as often as you need, in person, via email or over video chat. To find your local SCORE chapter, go to: www.score.org

Small Business Development Centers are a network of centers that provide counseling and training to help small business owners with a variety of topics such as: marketing, regulatory compliance, technology development and international trade. Find your local Small Business Development Center at: www.msbdc.org

Women interested in starting or growing a small business can tap into a national network of community-based Women's Business Centers. These centers offer training and counseling to those looking to make their entrepreneurial mark. WBCs offer a variety of programs in finance, management and marketing. For your nearest Women's Business Center visit: www.cweonline.org

Veteran entrepreneurs or small business owners can receive business training, counseling and mentoring at Veterans Business Outreach Centers. At these centers, veterans can also find out about financing options and receive procurement guidance which can help them better compete for government contracts. Find your local VBOC at: www.cweonline.org/vboc

#### **Government Contracting Highlights**

Government contracts are a tremendous financial opportunity for small businesses. The U.S. government is the largest customer in the world. It buys all types of products and services — in both large and small quantities — and it's required by law to consider buying from small businesses.

#### Awards to Small Businesses = \$4.1 billion (estimated 1/31/2020)

Small Business: \$2.9 billion

HUBZone Firms: \$70 million

8(a) Firms: \$99 million

Veteran Owned: \$262 million

Service Disabled Vets: \$232 million

Women Owned: \$555 million

## HOW AN STTR TO DEVELOP AI FOR MARS HAS IMPROVED OUR LIFE ON EARTH

Neurala is on a mission to make artificial intelligence more applicable and useful in the real world. Its core technology allows you to build a brain, a custom neural network modeled after the human brain that can interact with its environment and imitate human learning.

The idea for Neurala came about in a coffee shop in 2006; cofounders Max Versace, Anatoly Gorshechnikov and Heather Ames were working together on their PhDs at the Boston University Department of Cognitive and Neural Systems. The team came to the realization that major developments in the latest graphics processors for gaming, also had vast potential for artificial intelligence.



What if each pixel was treated like a neuron of a brain? This notion was tested and granted a patent, enabling Neurala's founders to build practical applications for the technology. In 2009, the team had established a company and began subcontracting with Hewlett Packard on a Defense Advanced Research Projects Agency (DARPA) project aimed at developing low-power computers and software capable of emulating human neural systems. In 2010, a NASA Langley Research Center engineer found out about the team's work after reading Versace's DARPA research article in IEEE Spectrum, a magazine published by the Institute of Electrical and Electronics Engineers.

The NASA engineer immediately saw potential for improving the efficiency of a mission to Mars with Neurala's brain-inspired solution. It was the tech's ability to address the problem of processing power limitations by collocating computational capability with memory that piqued his interest. Without solicitation, the engineer reached out to Neurala and he pitched the team to work with NASA on a Small Business Technology Transfer (STTR) contract.

In 2011, Neurala was awarded \$125K to deliver **STTR Phase I** research. One of the unique requirements of the STTR program is that small businesses formally collaborate with a research institution in Phase I and II. Neurala completed the work in collaboration with Boston University's Neuromorphics Lab. The first phase focused on finding out how a rover on Mars could navigate by itself – learning unsupervised, in unfamiliar environments.

In 2013, the company received a **STTR Phase 2** award in the amount of \$700K to further develop its fundamental technology for commercialization. Funding is based on the results achieved in Phase I, the scientific and technical merit and commercial potential of the proposed Phase II project. Later that year, Neurala emerged from stealth after completing the Techstars startup accelerator program, which helped the company monetize its research and prepare for commercialization and further investment.

Today, Neurala's technology is used in over 53 million devices worldwide – powering robots, drones, smart devices, and industrial machines. The goal of its flagship product – Brain Builder - is to help enable any enterprise to leverage artificial intelligence technology, build custom vision AI models and deploy them in real-world applications, without requiring any knowledge of AI.

#### **Fund Innovations with the SBIR-STTR Program**

Technology-focused small businesses looking to fund research and development or prototyping operations may qualify for federal grants from 11 federal agencies participating in the SBIR-STTR program.

#### Massachusetts SBIR – STTR Funding (FY16—FY18)

SBIR Phase I Awards: 988 Awards for \$187 million

SBIR Phase II Awards: 599 Awards for \$706 million

SBIR Total: 1,587 Awards for \$893 million

STTR Phase I Awards: 152 Awards for \$31 million

STTR Phase II Awards: 65 Awards for \$63 million

STTR Total: 217 Awards for \$94 million



#### **Event Highlights in Fiscal Year 2019**



- The Annual Meeting with Lender Awards and Emerging Leaders Graduation was held on November 8th, in Worcester at Clark University, attended by nearly 200 small business community stakeholders.
- The Annual Small Business Week Awards Luncheon was held on May 8th, with 15 awardees from across the state honored at a ceremony held in Worcester at Assumption College.
- The Emerging Leaders program was held in Worcester for the second year, with 19 C-level executives graduating



#### **SBA Massachusetts Fiscal Year 2019 Highlights**

- Collectively, including 7(a), 504 and microloans, the SBA supported capital to 1971 small businesses for \$722 million in Massachusetts.
- 22% increase in microloan approvals by 10 microlenders with a total of 131 loans for \$2.33 million.
- 135 different lenders used SBA loan programs to create over 6,000 jobs and retain 7,600 jobs according to self-reported figures.
- The SBA Surety Bond Guarantee Program, through twelve surety companies, approved 114 bonds totaling \$53.75 million. Surety bonds help small businesses win contracts by providing the customer with a guarantee that the work will be completed.

### **State Trade Expansion Program (STEP) Grants**

State Trade Expansion Program grants are intended to offset international business development and related marketing costs for small businesses. STEP financial support helps US small businesses to:

- Learn how to export
- Participate in foreign trade missions and trade shows
- Obtain services to support foreign market entry
- Develop websites to attract foreign buyers
- Design international marketing products or campaigns

Commonwealth of Massachusetts was awarded \$500,000 by the SBA to continue the STEP program to help small businesses engage in international trade activities. The Commonwealth contributed \$166,667 in matching funds for a total of \$666,667 in grant funds. In fiscal year 2019, 42 small businesses were awarded STEP grants to support: trade show participation, overseas marketing and localization services, and subscription services from the U.S. Department of Commerce. For more information on Massachusetts STEP grants go to: www.mass.gov/export/step